

Cervico-cranial red flag screening tool.

Tabrah, Taylor, Kerry, Mourad, Bridge and Herdman - 2023.

This is an aide-mémoire which outlines some of the key cervical spine and headache red flags. It is not a triage tool and it is not an exhaustive list. We advocate thorough history taking, multi-systems clinical reasoning and a low threshold for onward referral/imaging if concerning features.

IMPORTANT: Avoid waiting for a 'full house' of late stage red flags - listen out for the more subtle early/middle stage red flags and act if concerned.



Neurological considerations - myelopathy

ASK:

- Paraesthesia/numbness hands (glove) and/or feet (sock)
- Neck pain and/or stiffness
- Bilateral arm and/or leg pain
- Loss of dexterity/clumsiness
- Weakness of the hands and/or feet
- Poor balance
- Reducing mobility
- Bladder/bowel dysfunction, etc.

TEST:

- Gait
- Upper/lower limb neurological exam
- Upper motor neuron tests e.g. Babinski, Hoffmanns, Tromner, Clonus, Romberg, Tandem, etc.

DCM *	Early symptoms	Middle-stage symptoms	Late symptoms
Hand numbness	✓		
Symptom variability day to day	✓		
Neck pain	✓		
Arm numbness		✓	
Clumsiness		✓	
Reduced dexterity		✓	
Heavy legs		✓	
Muscle spasms in the arms		✓	
Reducing mobility			✓
Loss of control of the legs			✓
Dragging legs			✓
Paralysis			✓
Muscle spasms in the legs			✓
Constipation			✓
Urinary incontinence			✓

Expert consensus project: Tabrah et al, 2023
 Note: none of these symptoms are diagnostic of DCM in isolation. A combination of symptoms increases the risk of DCM. Consider the whole picture and have a low threshold for onward referral/imaging if concerned.

* DCM = degenerative cervical myelopathy

FURTHER INFO: [Diagnosis/Clinical Examination - MYELOPATHY.ORG](https://www.myeopathy.org)
[Overview](#) | [Metastatic spinal cord compression in adults](#) | [Quality standards](#) | [NICE](#)

Vestibular considerations

ASK:

- Unilateral hearing loss or tinnitus
- Progressively deteriorating balance
- Severe vertigo symptoms or acute vertigo during sudden postural changes e.g. STS or rolling in bed
- Focal neurological symptoms e.g. diplopia, dysarthria, ataxia, papilloedema, cranial nerve palsies, etc.
- Any cardiac symptoms

TEST:

- DixHallpike and Supine Roll test: <https://aoa-hnsfjournals.onlinelibrary.wiley.com/doi/10.1177/0194599816689667>
- Oculomotor Tests - <https://novel.utah.edu/Gold/>
- Blood Pressure - lying and standing
- UL/LL neurological exam and cranial nerve tests
- Static and dynamic balance testing e.g. Romberg & Tandem

<https://www.bmj.com/content/366/bmj.l5215/infographic>

[Assessment](#) | [Diagnosis](#) | [Vertigo](#) | [CKS](#) | [NICE](#)

Vascular considerations

ASK:

- Trauma
- Vascular risk factors e.g. HTN, smoking, etc.
- Unusual presentation e.g. atypical headache - see headache red flags below
- Neck and oro-facial symptoms
- Cranial nerve symptoms e.g. issues with smell, vision, hearing, balance, etc.
- Focal neurological symptoms e.g. memory loss, vagueness, ptosis, etc.
- Giant cell/temporal arteritis symptoms e.g. jaw claudication, acute visual disturbance, tenderness of temporal artery, etc.

TEST:

- Upper/lower limb neurological exam
- Upper motor neuron tests
- Cranial nerve tests
- Co-ordination and gait
- Blood pressure

NHS
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BASIC CRANIAL NERVE TESTING

1 Olfactory: any problems with smell?

2 Optic nerve: visual fields test - cover one eye, should have 160 degrees horizontal vision and 120 vertical vision

3 Oculomotor, 4 Trochlear and 6 Abducens: H field test: cover one eye and see if they can follow you all along the H shape - test both eyes

5 Trigeminal: test facial sensation with light touch, ask them to clench their jaw and palpate the masseter muscle

7 Facial: raise eyebrows, show teeth, scrunch eyes, puff out cheeks, etc

8 Vestibulocochlear: test balance e.g. tandem walk and ask about hearing (or test hearing with finger rubbing)

9 Glossopharyngeal and 10 Vagus: any swallowing or choking? Say 'aah': is the uvula deviated?

11 Accessory: resist shoulder elevation and look for wasting SCM/UFT

12 Hypoglossal: resist lateral tongue flexion through the cheek and stick out tongue

If any tests are positive, further testing +/- onward referral may be needed. Tabrah & Butt, 2022

FURTHER INFO: [OMPT Frameworks and Clinical Resources \(ifompt.org\)](https://www.ompt.org)
 Cranial nerve testing: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8725776/>

Headache considerations

ASK: **SNOOP4** - <https://journals.sagepub.com/doi/full/10.1177/1024907920928688>

- Systemic features: e.g. fever, rash, malaise, persistent vomiting, etc.
- Neurological features: e.g. acute loss of memory, coordination, vision, speech, confusion, seizure, significant weakness, etc.
- Onset - speed: sudden onset thunderclap headache, first/worst, maximum intensity in <1 minute
- Onset - age: new onset headache in over 50 or under 5
- Previous history: cancer, HIV, etc.
- Post traumatic: head trauma within the last 3/12
- Positional/provoked: e.g. triggered by cough, sneeze, valsalva, forward bend, standing up or lying down
- Pattern change/progressive: significant worsening of frequency or intensity of symptoms

TEST

- Upper/lower limb neurological exam and cranial nerve tests: <https://www.youtube.com/watch?v=wyBNYB0RLvU>
- Blood pressure

FURTHER INFO: [British Association for the Study of Headache \(BASH\)](https://www.bash.org.uk) | <https://cks.nice.org.uk/topics/headache-assessment/>

Thorough history taking -- Consider each symptom in context -- Discuss with a colleague -- Trust gut instinct -- Act if concerned -- Safety net -- Monitor

<https://www.jospt.org/doi/10.2519/jospt.2022.11568>